



# ENGAGE™ 8100

## Polyolefin Elastomer

**Overview** ENGAGE™ 8100 Polyolefin Elastomer is an ethylene-octene copolymer that has excellent flow characteristics and performs well in a wide range of general purpose thermoplastic elastomer applications.

ENGAGE 8100 provides superb impact properties in blends with polypropylene (PP) and polyethylene (PE). ENGAGE 8100 provides high filler loading capability and outstanding peroxide cure capability. When cross-linked by peroxide, silane, or irradiation, it gives exceptional heat aging, compression set, and weather resistance properties, and may be used to produce high performance electrical insulation.

**Main Characteristics:**

- Pellet form
- Excellent flow characteristics
- Improved impact in polypropylene and polyethylene
- High filler loading
- Peroxide, silane, and radiation curable
- Exceptional heat aging, compression set, and weather resistance when cured

**Applications:**

- General purpose thermoplastic elastomers
- Wire and cable
- Impact modification

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.870 g/cm <sup>3</sup>	0.870 g/cm <sup>3</sup>	ASTM D792
Melt Index (190°C/2.16 kg)	1.0 g/10 min	1.0 g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 250°F (121°C))	24 MU	24 MU	ASTM D1646
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus - 100% Secant <sup>1</sup> (Compression Molded)	421 psi	2.90 MPa	ASTM D638
Tensile Strength <sup>1</sup> (Break, Compression Molded)	1420 psi	9.76 MPa	ASTM D638
Tensile Elongation <sup>1</sup> Break, Compression Molded	810 %	810 %	ASTM D638
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	2070 psi	14.3 MPa	
2% Secant : Compression Molded	1900 psi	13.1 MPa	
Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tear Strength <sup>2</sup>	228 lbf/in	40.0 kN/m	ASTM D624
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Compression Molded	73	73	
Shore D, 1 sec, Compression Molded	22	22	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Glass Transition Temperature	-61.6 °F	-52.0 °C	Dow Method
Vicat Softening Temperature	113 °F	45.0 °C	ASTM D1525
Melting Temperature (DSC) <sup>3</sup>	140 °F	60.0 °C	Dow Method
Peak Crystallization Temperature (DSC)	113 °F	45.0 °C	Dow Method

**Notes**

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

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<sup>1</sup> 20 in/min (510 mm/min)

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<sup>2</sup> Die C

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<sup>3</sup> 10°C/min

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